

The CBHSQ Report

Short Report

November 21, 2013*

UPDATE ON DRUG-RELATED EMERGENCY DEPARTMENT VISITS ATTRIBUTED TO INTENTIONAL POISONING: 2011

AUTHORS

Elizabeth H. Crane, Ph.D., M.P.H.

INTRODUCTION

Intentional poisoning can be a direct attempt to hurt someone or an attempt to render that person defenseless against other types of crime. Detecting this type of activity is difficult because a victim is often unable to recall what took place, and the intent of the suspect cannot be confirmed. Research has shown that victims often have been drinking alcohol, which impairs their ability to recognize dangerous situations and suspicious behavior of other individuals.¹ Depending on the drug or combination of drugs taken, victims may experience drowsiness and loss of consciousness, leaving them vulnerable to crimes such as robbery, physical assault, or sexual assault.^{2,3}

In 2011, poison control centers in the United States received more than 8,100 reports of intentional poisoning by another person, and in 2010, the Centers for Disease Control and Prevention's National Center for Injury Prevention and Control reported 79 homicide poisoning deaths.^{4,5} Although information for other drug-facilitated crimes is sparse, a study conducted in 2005 estimated that approximately 3 million American women experienced drug-facilitated rape in their lifetime.⁶ These statistics understate the extent to which drugs are used for intentionally impairing or harming others for several reasons: (1) drugs commonly used for this purpose may leave the body quickly and thus cannot be detected, (2) individuals who suspect they have been intentionally drugged may not seek immediate medical attention, and (3) certain drugs can cause victims not to remember events experienced while under the influence of the drug.^{7,8} In addition, studies have shown that many drug-facilitated rapes are never reported to authorities or treated in an emergency department (ED).⁷

Although few data sources provide insight into incidents of intentional poisoning, data from ED visits can provide information about the types of drugs involved when individuals who believe they have been drugged seek emergency care. A previous report addressing ED visits attributed to intentional poisoning was published using 2009 data; this issue of *The DAWN Report* is an update of that report and provides new findings from 2011 data.⁹



In Brief

- In 2011, there were an estimated 15,471 emergency department (ED) visits attributed to intentional drug poisoning
- About three quarters (77 percent) of drug-related ED visits attributed to intentional poisoning were made by patients aged 21 or older
- Females accounted for two thirds of drug-related ED visits attributed to intentional poisoning (66 percent)
- Approximately 65 percent of drug-related ED visits attributed to intentional poisoning in 2011 involved unidentified drugs, and a similar percentage involved alcohol in combination with other drugs (62 percent)

The Drug Abuse Warning Network (DAWN) is a public health surveillance system that monitors drug-related ED visits in the United States. To be a DAWN case, the ED visit must have involved a drug, either as the direct cause of the visit or as a contributing factor. DAWN includes drug-related ED visits attributed to intentional poisoning, which is classified as such when a patient’s ED medical chart indicates that she or he was deliberately drugged by another person with the intent of causing harm (e.g., drug-facilitated sexual assault). It should be noted that for these visits, toxicology tests may not always be conducted. When toxicology screens are conducted, drug identification may not be feasible because (1) ED staff may not know for which drug(s) to screen and (2) some drugs metabolize quickly so that a toxicology screen would have had to be conducted fairly soon after ingestion. This issue of *The DAWN Report* presents findings from 2011 regarding ED visits attributed to intentional poisoning across all ages and the types of drugs involved with those visits.

OVERVIEW

Of the estimated 5.1 million drug-related ED visits in 2011, approximately 15,471 visits were attributed to intentional poisoning. About three quarters (77 percent) of these visits were made by patients aged 21 or older, which was not significantly higher than the proportion involving this age group in 2009 (73 percent).⁹ Females accounted for approximately two thirds of these visits (66 percent), which was similar to the proportion involving females in 2009 (63 percent).

DRUGS INVOLVED IN ED VISITS

ED visits attributed to intentional poisoning can involve both identified and unidentified drugs. In 2011, approximately 65 percent of such ED visits involved unidentified drugs (Table 1). For this report, the “unidentified drug” category includes 5,991 visits for which patients lacked knowledge about the specific drug that was given to them (e.g., “a date rape drug”) and 4,023 visits that involved a drug to which DAWN was unable to assign a code (e.g., ambiguous slang names, foreign drug names). Overall, 40 percent of drug-related ED visits attributed to intentional poisoning involved unidentified drugs combined with alcohol, 23 percent involved unidentified drugs only, and 4 percent involved unidentified drugs combined with identified illicit drugs. About two thirds of ED visits (69 percent) attributed to intentional poisoning involved more than one drug (including alcohol and unidentified drugs), with an overall average of two drugs per ED visit.

Table 1. Drug-Related Emergency Department (ED) Visits Attributed to Intentional Poisoning, Unidentified Drugs Only and in Combination: 2011

Drug Category	Number of ED Visits	Percentage of Visits*
Total ED Visits	15,471	100
Any Unidentified Drug	10,014	65
Unidentified Drugs Only	3,498	23
Combinations of Unidentified Drugs with Other Drugs or Alcohol	6,516	42
Unidentified Drugs and Alcohol	6,128	40
Unidentified Drugs and Illicit Drugs	617	4

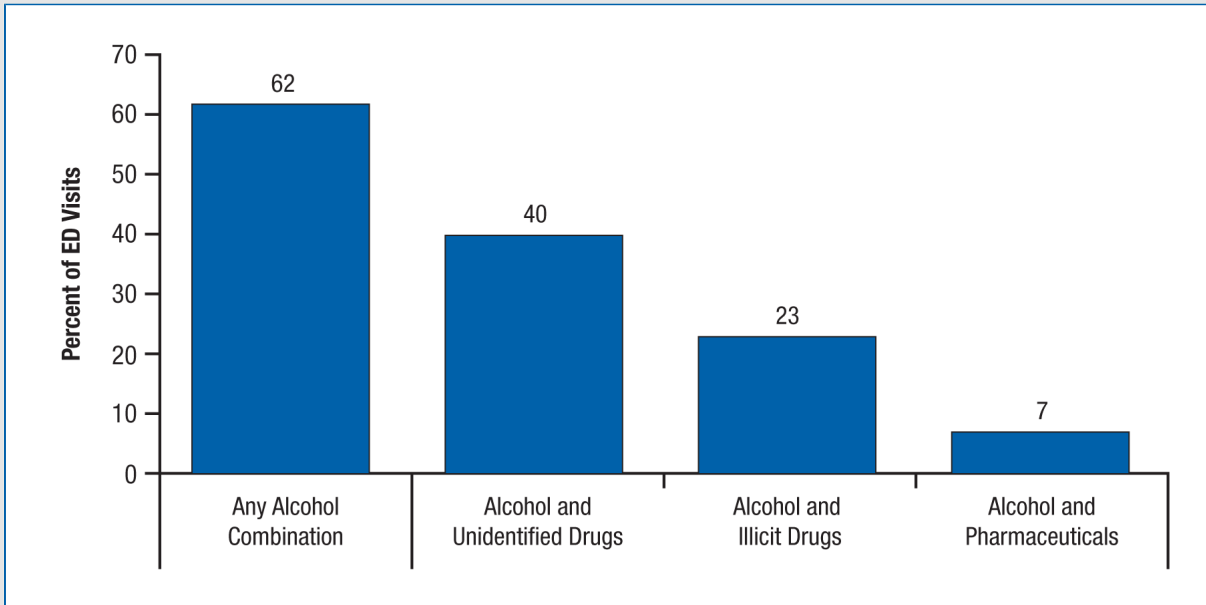
* Because multiple drugs may be involved in each visit, estimates of visits by drug may add to more than the total, and percentages may add to more than 100 percent.

Source: 2011 SAMHSA Drug Abuse Warning Network (DAWN).

ALCOHOL INVOLVEMENT

Approximately three in five (62 percent) drug-related ED visits attributed to intentional poisoning involved alcohol in combination with other drugs (Figure 1). Overall, alcohol was combined with unidentified drugs in 40 percent of visits, with illicit drugs in 23 percent of visits, and with pharmaceuticals in 7 percent of visits. It should be noted that DAWN does not collect data from ED visits in which alcohol is the only substance unless the patient is aged 20 or younger, and these visits are not included in the intentional poisoning cases.

Figure 1. Alcohol Combinations* Involved in Emergency Department (ED) Visits Attributed to Intentional Poisoning: 2011



* Because multiple drugs may be involved in each visit, percentages for each category may add to more than the overall percentage of alcohol combinations.
Source: 2011 SAMHSA Drug Abuse Warning Network (DAWN).

ILLCIT DRUG INVOLVEMENT

About one third (34 percent) of drug-related ED visits attributed to intentional poisoning involved illicit drugs (Table 2). The specific illicit drugs most commonly identified in ED visits attributed to intentional poisoning include marijuana (13 percent) and illicit stimulants (i.e., amphetamines and methamphetamine; 7 percent). With respect to drug combinations, 8 percent of ED visits attributed to intentional poisoning involved illicit drugs only, 23 percent involved illicit drugs and alcohol, and 4 percent involved illicit drugs and unidentified drugs (Table 1 and Figure 2).

Table 2. Selected Drugs and Drug Combinations Involved in Emergency Department (ED) Visits Attributed to Intentional Poisoning: 2011

Drug Category	Number of ED Visits	Percentage of Visits*
Total ED Visits	15,471	100
Alcohol**	9,595	62
Illicit Drugs	5,275	34
Marijuana	1,975	13
Illicit Stimulants	1,097	7
Pharmaceuticals	2,049	13
Anti-Anxiety and Insomnia Medications***	1,125	7
Benzodiazepines	550	4
Pain Relievers	705	5
Combination of Alcohol and Illicit Drugs	3,518	23
Illicit Drugs Only	1,201	8
Combination of Alcohol and Pharmaceuticals	1,023	7

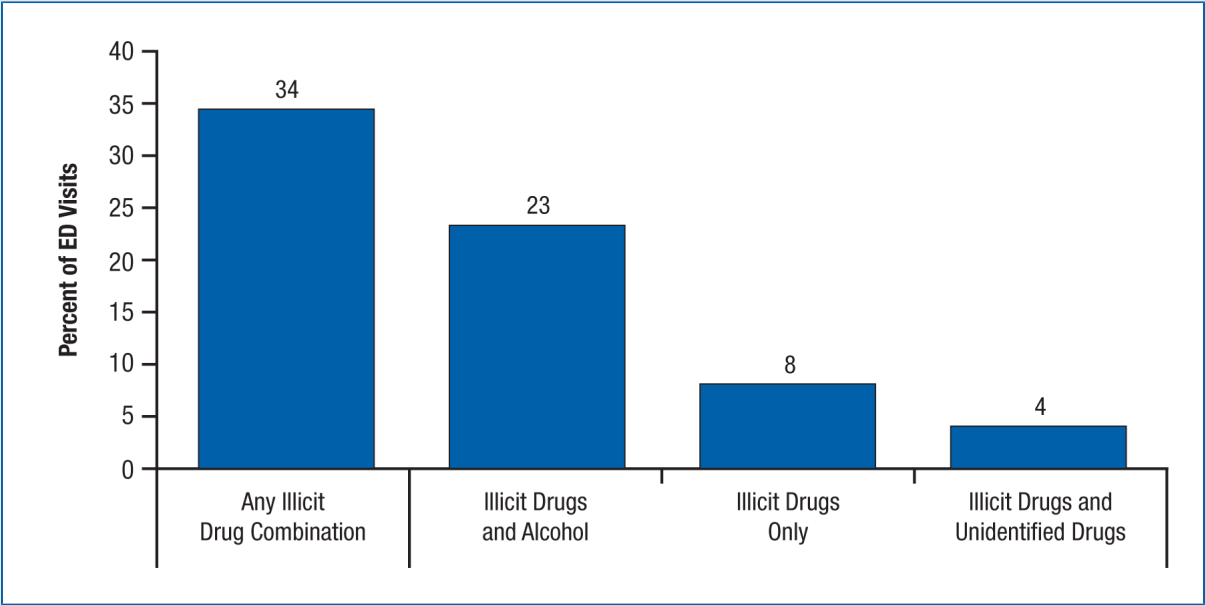
* Because multiple drugs may be involved in each visit, estimates of visits by drug may add to more than the total, and percentages may add to more than 100 percent.

** The alcohol category includes visits involving alcohol in combination with other drug(s) and excludes visits in which alcohol was the only drug.

***This drug category was previously labeled “Drugs to treat anxiety and insomnia.”

Source: 2011 SAMHSA Drug Abuse Warning Network (DAWN).

Figure 2. Types of Illicit Drug Combinations* Involved in Emergency Department (ED) Visits Attributed to Intentional Poisoning: 2011



* Because multiple drugs may be involved in each visit, percentages for each category may add to more than the overall percentage of drug combinations involving at least one illicit drug.

Source: 2011 SAMHSA Drug Abuse Warning Network (DAWN).

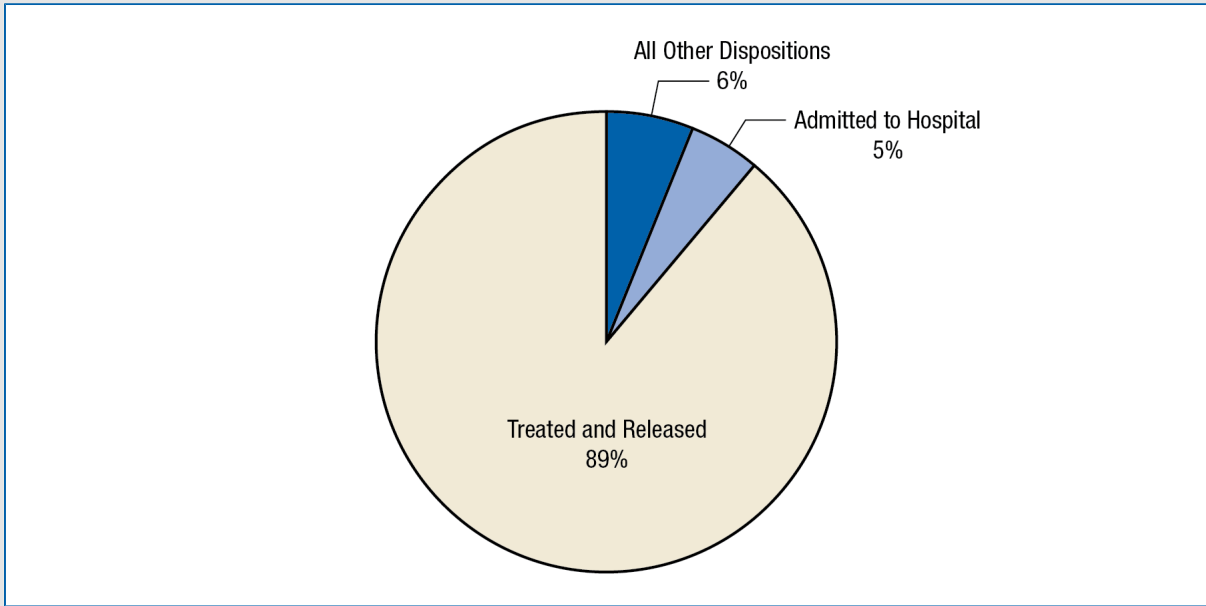
PHARMACEUTICAL INVOLVEMENT

Approximately 13 percent of drug-related ED visits attributed to intentional poisoning involved pharmaceutical drugs (Table 2). Drugs that treat anxiety and insomnia were the most common pharmaceuticals (7 percent), followed by pain relievers (5 percent).

DISPOSITION OF ED VISITS

Most drug-related ED visits attributed to intentional poisoning resulted in the patient being treated and released from the ED (89 percent) (Figure 3). The rest of the visits resulted in the patient either being admitted to the hospital (5 percent) or having some other disposition (6 percent), such as being transferred to another medical facility or leaving against medical advice.

Figure 3. Drug-Related Emergency Department (ED) Visits Attributed to Intentional Poisoning, by Visit Disposition: 2011



Source: 2011 SAMHSA Drug Abuse Warning Network (DAWN).

DISCUSSION

Various combinations of identified (e.g., alcohol and illicit drugs) and unidentified drugs were involved in ED visits attributed to intentional poisoning. Some drugs can be mixed easily in alcohol, which can both amplify the drugs’ effects and also provide a surreptitious method to poison unsuspecting victims and render them vulnerable. According to 2011 DAWN data, 6 out of 10 ED visits attributed to intentional poisoning involved drugs combined with alcohol. Also, in 65 percent of the visits, patients did not know what specific drugs were given to them.

Such possibilities highlight the importance of heightening public awareness of the potential use of drugs for intentional poisoning in group settings—such as bars, dance clubs, and concerts—in which alcohol or drugs are often consumed. Informational campaigns can educate people about the risks involved with leaving beverages unattended or accepting alcoholic beverages or drugs from others, either from strangers or from people they know. These messages may be especially important for young adults who are not of legal drinking age and are therefore more open to accepting a “free” drink. However, the finding that adults aged 21 or older comprised the majority of the ED visits attributed to intentional poisoning emphasizes that no one, not just young people, should permit their drinks to be handled by others. Also, any individuals consuming

recreational drugs should be aware that the drugs they are using may have been adulterated with other substances that could have unexpected, potentially hazardous side effects. In situations and venues in which alcohol and drugs might be used, prevention campaigns could encourage friends to use the “buddy system” to ensure safety. Educational public service messages could instruct individuals to seek medical care immediately if a poisoning is suspected. Immediate action is critical because it can alert medical staff to evaluate the possibility of drug-induced adverse effects promptly.

END NOTES

1. Abbey, A., BeShears, R., Clinton-Sherrod, A. M., & McAuslan, P. (2004). Similarities and differences in women’s sexual assault experiences based on tactics used by the perpetrator. *Psychology of Women Quarterly*, 28(4), 323-332.
2. National Institute on Drug Abuse. (2010). *DrugFacts: Club drugs (GHB, ketamine, and Rohypnol)*. Retrieved from <http://www.drugabuse.gov/infofacts/clubdrugs.html>
3. U.S. Department of Health and Human Services, Office on Women’s Health. (2008). *Date rape drugs: Frequently asked questions*. Retrieved from <http://www.womenshealth.gov/publications/our-publications/fact-sheet/date-rape-drugs.pdf>
4. Bronstein, A. C., Spyker, D. A., Cantilena, L. R., Jr., Rumack, B. H., & Dart, R. C. (2012). 2011 annual report of the American Association of Poison Control Centers’ National Poison Data System (NPDS): 29th annual report. *Clinical Toxicology*, 50(10), 911-1164.
5. National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. (2013). *WISQARS: Fatal injury reports, national and regional, 1999-2010*. Retrieved from http://webappa.cdc.gov/sasweb/ncipc/mortrate10_us.html
6. Kilpatrick, D. G., Resnick, H. S., Ruggiero, K. J., Conoscenti, L. M., & McCauley, J. (2007). *Drug-facilitated, incapacitated, and forcible rape: A national study*. Retrieved from <https://www.ncjrs.gov/pdffiles1/nij/grants/219181.pdf>
7. Fisher, B. S., Daigle, L. E., Cullen, F. T., & Turner, M. G. (2003). Reporting sexual victimization to the police and others: Results from a national-level study of college women. *Criminal Justice and Behavior*, 30(1), 6-38.
8. Drug Enforcement Administration. (2011). *Drugs of abuse: 2011 edition*. Retrieved from http://www.justice.gov/dea/pr/multimedia-library/publications/drug_of_abuse.pdf
9. Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Quality and Statistics. (2011, November). *The DAWN Report: Drug-related emergency department visits attributed to intentional poisoning*. Rockville, MD.

SUGGESTED CITATION

Crane, E.H. *Update on Drug-Related Emergency Department Visits Attributed to Intentional Poisoning: 2011*. The CBHSQ Report: November 21, 2013. Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Rockville, MD.

SUMMARY

Background: Intentional poisoning can be a direct attempt to hurt someone or an attempt to render that person defenseless against other types of crime. Detecting this type of activity is difficult because a victim is often unable to recall what took place, and the intent of the suspect cannot be confirmed. Research has shown that victims often have been drinking alcohol, which impairs their ability to recognize dangerous situations and suspicious behavior of other individuals. Depending on the drug or combination of drugs taken, victims may experience drowsiness and loss of consciousness, leaving them vulnerable to crimes such as robbery, physical assault, or sexual assault. **Methods:** National estimates of Emergency Department (ED) visits attributed to intentional poisoning were analyzed using data from the 2011 Drug Abuse Warning Network (DAWN). **Results:** In 2011, there were an estimated 15,471 emergency department (ED) visits attributed to intentional drug poisoning. 77% of these ED visits were made by patients aged 21 or older. Females accounted for 66% of these visits. Approximately 65% of drug-related ED visits attributed to intentional poisoning in 2011 involved unidentified drugs, and 62% involved alcohol in combination with other drugs. **Conclusion:** Various combinations of identified (e.g., alcohol and illicit drugs) and unidentified drugs were involved in ED visits attributed to intentional poisoning. Some drugs can be mixed easily in alcohol, which can both amplify the drugs' effects and also provide a surreptitious method to poison unsuspecting victims and render them vulnerable. According to 2011 DAWN data, 6 out of 10 ED visits attributed to intentional poisoning involved drugs combined with alcohol. Also, in 65% of the visits, patients did not know what specific drugs were given to them.

Key words: intentional poisoning, alcohol, Drug Abuse Warning Network, DAWN, emergency department

AUTHOR INFORMATION

cbhsqrequest@samhsa.hhs.gov

KEYWORDS

Short Report, Emergency Department Data, 2011, Researchers, Alcohol, Illegal Drugs, Prescription Drugs, All US States Only

The Substance Abuse and Mental Health Services Administration (SAMHSA) is the agency within the U.S. Department of Health and Human Services that leads public health efforts to advance the behavioral health of the nation. SAMHSA's mission is to reduce the impact of substance abuse and mental illness on America's communities.

The Drug Abuse Warning Network (DAWN) was a public health surveillance system that monitored drug-related morbidity and mortality. DAWN used a probability sample of hospitals to produce estimates of drug-related emergency department (ED) visits for the United States and selected metropolitan areas annually. DAWN also produced annual profiles of drug-related deaths reviewed by medical examiners or coroners in selected metropolitan areas and States.

Any ED visit related to recent drug use was included in DAWN. All types of drugs - licit and illicit - were covered. Alcohol involvement was documented for patients of all ages if it occurred with another drug. Alcohol was considered an illicit drug for minors and was documented even if no other drug was involved. The classification of drugs used in DAWN was derived from the Multum Lexicon, copyright 2012 Lexi-Comp, Inc., and/or Cerner Multum, Inc. The Multum Licensing Agreement governing use of the Lexicon can be found at <http://www.samhsa.gov/data/emergency-department-data-dawn>.

DAWN was one of three major surveys conducted by SAMHSA's Center for Behavioral Health Statistics and Quality (CBHSQ). For more information on other CBHSQ surveys, go to <http://www.samhsa.gov/data/>. SAMHSA has contracts with Westat (Rockville, MD) and RTI International (Research Triangle Park, NC) to operate the DAWN system and produce publications. For publications and additional information about DAWN, go to <http://www.samhsa.gov/data/emergency-department-data-dawn>.



U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES
Substance Abuse & Mental Health Services Administration
Center for Behavioral Health Statistics and Quality
www.samhsa.gov/data